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| SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA | | | FIDLER, SHELBY LEE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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DETAILED ACTION

Responsive Office Action

This Office Action is responsive to Applicant's remarks and amendments filed 7/1/2010.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fabbri (US 6068367) in view of Boyd et al. (US 2002/0180835 A1) and Arthur et al. (US 5049898).

Regarding claim 1:

Fabbri discloses a printer cartridge for removable insertion in an inkjet printer, the printer cartridge comprising:

a printing fluid storage (reservoirs 16b);

a cover molding (metal frame 3 acts to cover the underside of modules 5) defining a recess (one of grooves 24) for receiving a removable ink refill cartridge (main reservoir 9), the cover molding further defining a plurality of passageways (openings 4)

Art Unit: 2861

providing fluidic access from outside the printer cartridge to the printing fluid storage (Figs. 1-2);

a pagewidth printhead (the set of printing modules 5) in fluid communication with the printing fluid storage (col. 5, lines 9-12), the pagewidth printhead having an elongate array of nozzles (2) extending transverse to a media feed direction (col. 4, lines 38-44 & Fig. 1);

a plurality of ink chambers (reservoirs 16a) provided in the pagewidth printhead (Fig. 2), each of the plurality of ink chambers in fluid communication with the printing fluid storage (Fig. 2) and arranged to feed the elongate array of nozzles with ink (col. 6, lines 23-36); and

a first electrical connector (upper PCB 6 shown in Fig. 1) in electrical communication with the printhead (col. 4, lines 52-59) and disposed adjacent a first end (left end shown in Fig. 1) of the elongate array of nozzles (Fig. 1).

Fabrizi does not expressly disclose that the cover molding defines a plurality of passageways providing fluidic access from outside the printer cartridge to the printing fluid storage, or that the printer cartridge comprises an authentication device.

However, Boyd et al. disclose a pagewidth printhead cartridge (pen 200) comprising printing fluid storage (channel 54) and a cover molding (bottom layer 72 of substrate 32) to which a removable ink refill reservoir (202) is connected (paragraph 54), wherein the cover molding comprises a plurality of passageways (fluid openings 86, 88) that provide fluidic access from outside of the printer cartridge to a printing fluid storage (paragraph 54). Boyd et al. teach that, by utilizing such a multiple passageway

Art Unit: 2861

construction, the printhead cartridge may handle multiple colors in a single unitary device (paragraph 56).

Also, Arthur et al. disclose a printer cartridge (12) comprising an authentication device (element of memory 14 storing orifice plate alignment data) for authenticating one or more properties of the printhead with the inkjet printer (col. 4, lines 18-20), wherein the authentication device is connected to the inkjet printer via an electrical connector (Fig. 3). Arthur et al. teach that, by utilizing such an authentication device, the printer cartridge may be able to compensate for any printhead misalignment errors and enable indication of ink information to the user (col. 2, lines 14-32).

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Fabbri's printer cartridge to include multiple passageways in the cover molding, such as suggested by Boyd et al., and to include an authentication device in communication with the electrical connector, such as suggested by Arthur et al.

Examiner notes the additional limitation that "the first authentication device is connected to an authenticated data bus of the inkjet printer." As stated in previous office actions, this limitation only serves to define the inkjet printer and does not appear to limit the structure of the printer cartridge to which the claim is drawn. Therefore, this limitation has not been granted patentable weight.

Art Unit: 2861

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fabbri as modified by Boyd et al. and Arthur et al., as applied to claim 1 above, and further in view of Inpyn (US 6053598).

Regarding claim 2:

Fabbri's modified printer cartridge comprises all the limitations of claim 1, and **Fabbri also disclose** a second electrical connector (lower PCB 6 shown in Fig. 1) disposed adjacent a second end of the elongate array of nozzles (Fig. 1).

Fabbri's modified printer cartridge does not comprise a second electrical connector that releasably engages with a second corresponding connector of the inkjet printer with a contact force that is parallel to the longitudinal extent of the elongate array of nozzles.

However, Inpyn disclose a printer cartridge (10) that provides electrical connectors (contact pads 50) on each of both ends of an elongate array of nozzles (Fig. 18) such that the electrical connectors engage with corresponding connectors of an inkjet printer with a contact force that is parallel to the longitudinal extent of the elongate array of nozzles such that a longitudinal compressive force acts on the printer cartridge when it is installed in the inkjet printer (Fig. 18). Inpyn teach that this electrical configuration reduces the manufacturing costs by reducing the contact density of each of the contact pads (col. 12, lines 30-35) and occupies a minimal amount of space of the surface of the print head housing (col. 15, lines 48-52).

Art Unit: 2861

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to further modify Fabbri's printer cartridge to have the electrical connector configuration suggested by Inpyn.

Regarding claim 3:

Fabbri's modified printer cartridge comprises all the limitations of claim 2, and **Fabbri also disclose** that the printing fluid storage, pagewidth printhead are attached to a body of the printer cartridge (Fig. 2). **Further, Inpyn disclose** that the first and second electrical connectors are attached to a body of the printer cartridge (Fig. 18).

Therefore, each of the printing fluid storage, pagewidth printhead, and first and second electrical connectors are connected to a body of Fabbri's modified printer cartridge.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Art Unit: 2861

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 7258432 B2 in view of Fabbri (US 6068367).

Regarding claim 1:

Claim 4 of U.S. Patent No. 7258432 B2 claims each and every element of instant claim 1, as shown by the table below, **except** that the refill interface defines a recess for receiving the refill unit, and that the printhead is provided with a plurality of ink chambers in fluid communication with the printing fluid storage and arranged to feed the elongate array of nozzles with ink.

However, Fabbri disclose a printer cartridge (Fig. 2) having a refill interface that includes recesses (grooves 24) for receiving an ink refill reservoir (col. 6, lines 36-41 & Fig. 2) to allow the refill reservoir to couple to the printer cartridge (col. 6, lines 36-41), and that the printhead is provided with a plurality of ink chambers (reservoirs 16a), each of the plurality of ink chambers in fluid communication with the printing fluid storage (Fig. 2) and arranged to feed the elongate array of nozzles with ink (col. 6, lines 23-36); and

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the invention described by claim 4 of U.S. Patent No. 7258432 B2 to include a recess in the refill interface and to include a plurality of ink chambers in the printhead.

| Instant Application 10/760264 | U.S. Patent No. 7258432 B2 |
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| Claim 1 – A printer cartridge for removable insertion in an inkjet | Claim 1 - A printer cartridge for an inkjet printer including: a |

Art Unit: 2861

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| <p>printer, the printer cartridge comprising: <u>a printing fluid storage</u>; <u>a cover molding</u> defining a recess for receiving a removable ink refill cartridge, the cover molding further defining <u>a plurality of passageways</u> providing fluidic access from outside the printer cartridge to the printing fluid storage; <u>a pagewidth printhead</u> in fluid communication with the printing fluid storage, the pagewidth printhead having an elongate array of nozzles extending transverse to a media feed direction; <u>a first electrical connector</u> in electrical communication with the printhead and disposed adjacent a first end of the elongate array of nozzles; and <u>a first authentication device</u> that authenticates one or more properties of the printhead with the inkjet printer, wherein the first authentication device is connected to an authenticated data bus of the inkjet printer via the first electrical connector.</p> | <p>cartridge body for mounting the cartridge in the inkjet printer, the cartridge body having <u>printer contacts</u> for electrical connection to an electronic controller within the inkjet printer; a <u>plurality of ink storage reservoirs</u> for sealed storage of different inks, each of the ink storage reservoirs being at least partially defined by a collapsible membrane, and partially defined by rigid wall sections, the rigid wall sections of each of the ink storage reservoirs defining an inlet and an outlet; <u>a printhead</u> in sealed fluid communication with the outlets and electrically connected with the printer contacts for receiving print data and power for operation; <u>a plurality of refill ports</u> in sealed fluid communication with each of the inlets respectively for receiving refill ink; <u>a refill interface</u> positioned on the cartridge body exterior, the refill interface having the refill ports positioned adjacent each other and refill data contacts for connection to complementary contacts on a refill unit when it docks with the refill interface; and <u>an integrated circuit assembly</u> arranged to store information relating to the properties of at least one of the refill ink, the ink stored in the ink storage reservoir and the performance characteristics of the printer cartridge, the integrated circuit assembly being connected to the refill data contacts and the printer contacts, such that the electronic controller adjusts the printhead operation in response to the information provided by the integrated circuit assembly.</p> <p>Claim 4 - A printer cartridge according to claim 1, wherein the printhead is a <u>pagewidth printhead</u>.</p> |
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Response to Arguments

Applicant's arguments filed 7/1/2010 have been fully considered but they are not persuasive.

Applicant contends that “Fabbri does not teach or suggest a plurality of ink chambers that are in fluid communication with the printing fluid storage, which ink chambers are arranged to feed an elongate array of nozzles with ink.” However, Applicant’s arguments are based solely on the previous interpretation of Fabbri, which identified the entire reservoir 16 as corresponding to the claimed printing fluid storage. However, Fabbri expressly teaches that the reservoir 16 contains two portions: a free fluid reservoir 16a; and an absorbent wick mass 16b. Fabbri further teaches that these portions are separated by a filtering system 23; therefore, reservoirs 16a and 16b may

Art Unit: 2861

correspond to separately claimed elements. As such Fabbri does disclose both a fluid storage and a plurality of ink chambers.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication with the USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHELBY FIDLER whose telephone number is (571)272-8455. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2861

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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